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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,424	08/21/2003	David L. Thornton	H 50034	8066

7590

11/15/2004

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EXAMINER

GORMAN, DARREN W

ART UNIT PAPER NUMBER

3752

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,424

Applicant(s)

THORNTON, DAVID L.

Examiner

Darren W Gorman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,13,14,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 8-12,15-17 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/21/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The IDS filed on 21 August 2003 is hereby acknowledged and has been placed of record. Please find attached a signed and initialed copy of the PTO 1449.

Specification

2. The disclosure is objected to because of the following informalities:
On page 4, line 21 of the specification, "spaced legs 38" should be changed to --spaced legs 37--.
Appropriate correction is required.

Minor Claim Suggestions By Examiner

3. The following change(s) are recommended to improve clarity of the claims. The claims have been examined on the merits including the suggested changes below.
In claim 9, on lines 2-3, "said interior" should be changed to --said inner surface--, in order to conform to its antecedent language.
In claim 16, on lines 2-3, "said interior" should be changed to --said inner surface--, in order to conform to its antecedent language.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 20, the method step on lines 10-12, which recites, “creating a vacuum in the supply/discharge tube to draw in flowable material through the product line and supply/discharge tube” is not adequately described in the specification. Applicant’s specification on page 6 clearly states that the vacuum created in the supply/discharge tube is only used during the first fill but not after later use to contract the bladder snugly against the tube. Examiner presumes that the vacuum is used to remove any air from within the bladder prior to the bladder being filled with the flowable material in order to maximize the volume of the bladder for storing the flowable material. The specification further states, “The flowable material product is then pumped through product line...”. It appears that claim 20 was mistakenly drafted to recite that the vacuum source draws the flowable material into the product line and up into the supply/discharge tube, rather than reciting that the flowable material is pumped through the product line after contracting the bladder snugly against the tube by using the vacuum source. The specification does not describe using the vacuum source for any other purpose.

For the purpose of examination, the claims will be examined as best understood by the Examiner.

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6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, the recitation “said elbow extension” lacks antecedent basis.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al., USPN 3,406,722.

Thompson shows a pressure vessel (10) (see Figure 1) having a rigid outer shell (12), a supply/discharge tube (24) coaxially mounted in the vessel within the shell, the tube having multiple perforations (see column 3, lines 6-9), the tube further having an inlet opening (28) for receiving flowable materials and an outlet opening for discharging the flowable materials, the inlet and outlet openings being the same opening comprising a combined inlet/outlet opening (28), an expandable flexible bladder (20) mounted around and enclosing the tube over a length which includes the perforations whereby the flowable materials in the tube may selectively flow

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from the tube into the bladder to expand the bladder and may flow from the bladder back into the tube when the bladder is contracted, the rigid outer shell having an inner surface and a compressed air connection (34) for connection to a source of compressed air mounted for feeding compressed air into the shell between the inner surface of the shell and the bladder to cause the bladder to contract and to thereby force the flowable materials in the bladder back into the tube and out of the outlet opening (see column 3, lines 43-62).

10. Claims 1, 2, 13, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruth, USPN 3,406,722.

Regarding apparatus claims 1, 2, 13, and 18, Ruth shows a pressure vessel (see the Figure) having a rigid outer shell (10), a supply/discharge tube (30) coaxially mounted in the vessel within the shell, the tube having multiple perforations (34), the tube further having an inlet opening for receiving flowable materials and an outlet opening for discharging the flowable materials, the inlet and outlet openings being the same opening comprising a combined inlet/outlet opening, the inlet/outlet opening of the tube being connected to an extension (26) located partially outside of the vessel and connected to a product line (36), and a flow control valve (38) located between the product line and the tube extension. Ruth further shows the vessel including an expandable flexible bladder (40) mounted around and enclosing the tube over a length which includes the perforations whereby the flowable materials in the tube may selectively flow from the tube into the bladder to expand the bladder and may flow from the bladder back into the tube when the bladder is contracted, the rigid outer shell having an inner surface and a compressed air connection (44) for connection to a source of compressed air

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mounted for feeding compressed air into the shell between the inner surface of the shell and the bladder to cause the bladder to contract and to thereby force the flowable materials in the bladder back into the tube and out of the outlet opening (see column 2, lines 53-69). Ruth further shows the vessel mounted on a support base (legs (12) and a horizontal support below the legs, as seen in the Figure).

Regarding method claim 20, the device shown by Ruth, as discussed above, expressly performs the method steps recited (see column 2, lines 57-69). Therefore, the method follows the apparatus.

Note: Although Ruth does not teach the apparatus having an arrangement which may “draw in” the flowable material by “creating a vacuum in the supply/discharge tube”, as recited in claim 20, Applicant’s attention is drawn to paragraph 5 of this Office Action, which explains that Applicant’s apparatus, as disclosed in the specification, pumps the flowable material into the vessel through the inlet to expand the bladder (see Applicant’s specification, page 6, lines 8-20). The apparatus shown by Ruth expressly states that the flowable material is “pumped into the tank through the inlet pipe to expand the bag” (see column 2, lines 57-58). Therefore, the apparatus shown by Ruth anticipates the method of filling and discharging a flowable material from an accumulator tank, as recited in claim 20, as best understood by the Examiner.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3-7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al., in view of Ruth.

Thompson shows all of the claimed limitations as set forth in claim 1, and further Thompson shows the apparatus including an elbow extension (no reference number, shown between conduit (30) and tube inlet/outlet (28) – see Figure 1) extending laterally below the perforated portion of the tube with a product line (30) mounted to and in flow communication with the elbow extension. Thompson also shows the apparatus wherein the bladder is removably clamped (via clamping rings (40a and 40b)) to the tube (see Figure 1; and column 3, lines 33-37).

However, Thompson does not expressly teach locating a flow valve for selectively opening flow communication between the product line and the elbow extension. Thompson also does not expressly teach the vessel being mounted on a “pallet-type” base having a plurality of legs for supporting the vessel, the product line and the elbow extension being located between the bottom of the vessel and the support base.

Ruth teaches a pressurized accumulator vessel (10) being mounted to a “pallet-type” base (horizontal portion below reference number 12 – see the Figure) having a plurality of upright legs (12), the vessel being mounted on the plurality of legs. Ruth further teaches a flow valve (38) being located between a tube extension (26) and a portion of a product line (36) for selectively opening flow communication between the product line and the extension (see the Figure; and column 2, lines 33-40). The apparatus of Ruth further shows the product line and tube extension in an orientation where they are both located between the bottom of the vessel and

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the support base (see the Figure). Note: Applicant's disclosure gives no special meaning to the words "pallet type". For this reason, the horizontal support shown below the upright legs (12) can reasonably be interpreted to be of a "pallet type". Further, by Applicant's own admission, the type of support arrangement used is not critical to the operation of the invention - "Any suitable support arrangement could be used for mounting vessel 12 on the base 36." (see Applicant's specification, page 4, lines 22-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a flow valve, as taught by Ruth, between the product line and the elbow extension shown by Thompson, in order to selectively control communication of flowable materials between the product line and the elbow extension.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a support base with a plurality of upright legs, as taught by Ruth, for supporting the pressure vessel shown by Thompson, in order to securely and safely mount the vessel in an upright manner (i.e. having rounded end (16a) as the tank bottom) for saving horizontal space when the tank is in storage, and thus protecting the bottom of the vessel, the elbow extension, and other related parts from being crushed under the weight of the vessel.

13. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al., in view of Ruth.

The device shown by Thompson, as discussed in paragraph 9 of this Office Action, expressly performs the method steps recited in claim 20 (see column 3, lines 43-64), however Thompson lacks a valve for controlling flow communication between the product line and the

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elbow extension. Thompson also does not expressly teach the vessel being mounted on a base.

Note: Although Thompson does not teach the apparatus having an arrangement which may “draw in” the flowable material by “creating a vacuum in the supply/discharge tube”, as recited in claim 20, Applicant’s attention is drawn to paragraph 5 of this Office Action, which explains that Applicant’s apparatus, as disclosed in the specification, pumps the flowable material into the vessel through the inlet to expand the bladder (see Applicant’s specification, page 6, lines 8-20). The apparatus shown by Thompson expressly states that the bladder is filled with flowable material by introducing the material through the inlet pipe to expand the cavity (42) within the bladder (see column 3, lines 43-47). Therefore, the apparatus shown by Thompson anticipates the method steps of filling and discharging a flowable material from an accumulator tank, as recited in claim 20, as best understood by the Examiner.

Ruth teaches a pressurized accumulator vessel (10) being mounted to a base (horizontal portion below reference number 12 – see the Figure) having a plurality of upright legs (12), the vessel being mounted on the plurality of legs. Ruth further teaches a flow valve (38) being located between a tube extension (26) and a portion of a product line (36) for selectively opening flow communication between the product line and the extension (see the Figure; and column 2, lines 33-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a flow valve, as taught by Ruth, between the product line and the elbow extension shown by Thompson, in order to selectively control communication of flowable materials between the product line and the elbow extension.

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Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a support base with a plurality of upright legs, as taught by Ruth, for supporting the pressure vessel shown by Thompson, in order to securely and safely mount the vessel in an upright manner (i.e. having rounded end (16a) as the tank bottom) for saving horizontal space when the tank is in storage, and thus protecting the bottom of the vessel, the elbow extension, and other related parts from being crushed under the weight of the vessel.

Allowable Subject Matter

14. Claims 8-12, 15-17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents to Havens, Mozic, Mercier, Greer, and Coleman, are cited as of interest.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W Gorman whose telephone number is 703-306-4205. The examiner may be reached at the above telephone number until November 23, 2004 and may be reached at (571) 272-4901 after November 23, 2004. The examiner can normally be reached on M-F 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 703-308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Darren W Gorman
Examiner
Art Unit 3752

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November 5, 2004



David A. Scherbel
Supervisory Patent Examiner
Group 3700